

FIBER TRANSITION SEGMENT FOR USE IN OPTICAL FIBER HYDROPHONE ARRAY

Abstract

A fiber transition segment for transitioning an optical fiber from a hydrophone module to the central axis of the module. The segment comprises a conical, elongated element and a cylindrical portion of reduced diameter that protrudes longitudinally from the wide end of the conical element. The cylindrical portion is reciprocally mounted within an interconnect spring at the end of the hydrophone assembly. The fiber transition segment has a helical internal groove for receiving the optical fiber from the interconnect spring. The groove is aligned with and approximately matches the pitch of the groove in the interconnect spring to provide a smooth transition to the fiber transition segment and then to the central axis of the module.